

REMARKS

Claims 1-24 stand preliminarily rejected. Claims 1, 3, 9, 10, 12, 15, 20 and 22 are currently amended. Reconsideration of the application is respectfully requested.

Objection To Abstract

The Examiner has preliminarily objected to the Abstract on the grounds that, "it should avoid using phrases which can be implied, such as 'One preferred embodiment of the present invention,' and, 'In a further preferred embodiment, the invention provides.'" Applicants respectfully submit that such a change is unnecessary and would improperly change the meaning of the Abstract.

The Manual of Patent Examiner Procedure, MPEP §608.01(b) provides examples such as "This disclosure concerns" and "This disclosure describes" as examples of phrases which can be implied. Applicants respectfully submit that the phrases, "One preferred embodiment of the present invention," and, "In a further preferred embodiment, the invention provides," provide an additional message which is not implied. For example, "One preferred embodiment" concisely explains that this is an example embodiment, but the patent is not limited to that specific embodiment. "In a further embodiment" concisely explains that a different embodiment is being described. In contrast, removing these phrases could improperly imply that the patent is limited to one specific embodiment.

Applicants submit that the Abstract is proper as drafted, and satisfies both the Patent Statute 35 U.S.C. § 112 and the Code of Federal Regulations, 37 C.F.R. 1.72. No change is necessary.

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Rejections Under §102**Cobo and Lunzman**

Claims 1, 2, 10-14, 20, 21 and 24 stand preliminarily rejected in view of Cobo et al. (U.S. Patent No. 6,305,162). Claims 1-2 stand preliminarily rejected in view of Lunzman (U.S. Patent No. 5,680,760). Applicants respectfully submit that these claims, as amended, are not taught or suggested by Cobo or Lunzman.

Cobo and Lunzman discuss hydraulic systems with valves; however, neither one teaches a valve in the flow path between the pump and the implement where the valve diverts the excess flow from the valve to an excess flow output leading to a reservoir. In contrast, for example in respect to claims 1 and 2, Lunzman teaches a "bypass valve 47" with a "bypass line 46" "provided to return hydraulic fluid to the reservoir. (Col. 2, ll.17-44). This bypass valve operates in a different manner from the present claim. Further, Lunzman's Fig. 1, illustrates that Lunzman's bypass valve 47 is not in the flow path between pump 13 and implement 18, 19 or 20. Lunzman's control valves 22-24 include a flow return path *after* fluid is supplied to an "actuator", but not an *excess* flow output.

Similarly, Cobo does not teach or suggest a valve in the flow path between the pump and the implement where the valve diverts the excess flow from the valve to an excess flow output leading to a reservoir. Cobo's control valve 120 and 122 use open centered valves 124, 126 which include a flow return path *after* fluid is supplied to an "actuator", but do not teach or suggest the valves providing an *excess* flow return output (Cobo, Fig. 1 and Col.3).

Moreover, Cobo is concerned with a different problem and function. Cobo is concerned with minimizing the "deadband" within a joystick control, which controls variable fluid and power output to an actuator. In contrast, embodiments of the present system (such as claims 1,12

and 20) focuses on providing a substantially constant optimal flow to an implement. Cobo does not teach or suggest providing a substantially constant optimal flow to an implement.

For at least these reasons, Lunzman does not teach or suggest claims 1-2 as amended and Cobo does not suggest claims 1-2, 10-14, 20-21 and 24 as amended. Withdrawal of the rejections is respectfully requested.

Chatterjea and Peterson

Claims 3-5 and 8 stand preliminarily rejected in view of Chatterjea et al. (U.S. Patent No. 4,779,416), and claims 3-5 and 7-11 stand preliminarily rejected in view of Peterson (U.S. Patent No. 3,952, 510). Applicants respectfully submit that these claims, as amended, are not taught or suggested by Chatterjea or Peterson.

For example, claim 3, as amended, includes, "a secondary pump switchable from a standby state with at most minimal pump flow to an engaged state with substantial pump flow." The pumps discussed in Chatterjea (pumps 16, 18 and 20) and Peterson (pumps 15, 16 and 30) are not switchable to or from a disengaged state, but instead pump continuously. For example, Chatterjea teaches that:

when the pressure increases and additional fluid volume is needed to rapidly move either the bucket cylinder 58 or the boom cylinders 50 and 52, that volume is available because both the primary pump 16 and the auxiliary pump 18 are supplying fluid into the loader valve means 32." (Col. 5, ll.23-28)

Instead of switching the pump state, Chatterjea changes the valve orientation which "opens the flow path" resulting in "bypassing or recirculation of the auxiliary pump fluid to the reservoir." (col. 5, ll.49-51 and 62-68) In contrast, switching the secondary pump to or from a standby state, as claimed, eliminates the energy requirements of the secondary pump when not needed and eliminates heat and pressure from the system which would otherwise accompany unnecessary fluid flow.

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Similarly, Peterson teaches simultaneous and continuous pump flow through primary pumps 15 and 16. Peterson uses a control valve for, “variably combining fluid from the larger pump with that of the small pump for making larger steering corrections.” (col. 2, ll.47-50) during which the valve is “freely discharging fluid from the large pump back to the reservoir.” (col. 2, ll.45-47) For the auxiliary pump 30, Peterson teaches that normally the entire output of the auxiliary pump flows in a continuous, unused flow:

Under normal conditions, when the small pump 16 is providing fluid to the steering control valve 18 above the predetermined minimal flow rate, as is normally the case, the flow sensing and control apparatus 10 will be conditioned to unload the entire output of the auxiliary pump 30 to the large pump passage 35. (Col. 5, ll.13-18)

In contrast, switching the secondary pump to a disengaged or standby state, as claimed, eliminates the energy requirements of the secondary pump and eliminates heat and pressure from the system which would otherwise accompany unnecessary fluid flow.

Further, both Chatterjea and Peterson are concerned with different problems and functions than the present claims. Chatterjea is concerned with optimizing response times when *additional* fluid flow and power are needed. Peterson is concerned with a steering mechanism using low power to make “small steering corrections” which adds *additional* fluid flow to make “large steering corrections.” In contrast, the present system focuses on providing a substantially constant optimal flow to an implement. Neither Chatterjea nor Peterson teach or suggest providing a substantially constant, optimal flow to an implement.

For at least these reasons, neither Chatterjea nor Peterson teach or suggest claims 3-5 and 7-11 as amended. Withdrawal of the rejections is respectfully requested.

Rejections Under §103

Claims 6 and 12-24 stand preliminarily rejected over Chatterjea or Peterson in view of Cobo. Applicants respectfully submit that such a combination is not proper when considering the disparate functions and goals of the references; however, even if combined, Applicants respectfully submit that the references do not teach or suggest the present claims for at least the reasons discussed herein. Withdrawal of the rejections is respectfully requested.

Conclusion

Applicants respectfully submit that the cited references do not teach or suggest all the elements in the claims of the present application

The Applicants respectfully request further examination and the issuance of a timely Notice of Allowability for the pending claims. If the Examiner believes that there are any matters that can be resolved by a telephonic interview, the undersigned would welcome said call.

Respectfully submitted:



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